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Electricity on the Farm

July 1928

Another Argument for the Water System

A Farm Travels on Its Stomach

DID you ever stop to think that the most important part of the farm is the kitchen? And the dinner bell a symbol of service? It takes a lot of skill and hard work to prepare three meals of nourishing, healthful food each day—to maintain the family's energy and physical fitness for the long farm hours.

Is it hard work? Just try mother's duties once. You'll find that though "man works from sun to sun, woman's work is never done." There are the trips to the garden, the tedious peeling of potatoes, stringing beans, shelling peas; the mixing, cooking, baking, serving—plus doing the dishes, doing *all* the housework, the washing, ironing, mending, etc.

There's plenty to do without making fires, cleaning out ashes and scouring blackened pots and pans! There's no need to with *electricity*. Make mother's tasks lighter with a Hotpoint Electric Range. Do away with the *unnecessary* tasks and inconveniences.

Hundreds of thousands of women on farms, in villages and towns will tell you a Hotpoint Electric Range is *fast* and *economical*. It gives instant, clean heat at the turn of a switch—exactly as much or as little as you want. You can bake or roast more easily, too, without guesswork or watching—for the oven heat *stays* right where you want it. Hotpoint Ranges have exclusive features and conveniences to be found in no others. Ask your Electric Company for full information.

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THERE'S A HOTPOINT ELECTRIC RANGE FOR EVERY PURSE AND PURPOSE

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Electric Self-Oiling Water Systems

THE day you install a MYERS Self-Oiling Electric Water System you increase the value of your property and add to the health and comfort of every member of your household. You command, at the turn of a tap, fresh, clear water for kitchen, laundry and bathroom—for stock watering, sprinkling and fire protection.

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More than fifty years of experience is back of every MYERS Water System. We have an established reputation as world's headquarters for pumps for every purpose.

The MYERS line also includes hand and wind-operated water systems, hand and power pumps, pumping jacks, spray pumps, hay and grain unloading tools, barn and garage door hangers.

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The F. E. Myers & Bro. Co.
361 Orange St., Ashland, Ohio

Makers for over 50 years of MYERS Pumps for Every Purpose. Hay Tools and Door Hangers.

Electricity on the Farm

Vol. 1 JULY 1928 No. 13

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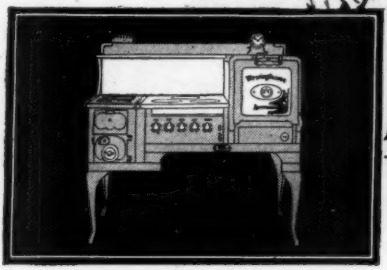
"That range will give you time for lots of things you want to do."



The range that cooks for you . . a new way

With a Westinghouse range in your kitchen, cooking becomes one of the easiest and pleasantest things you do. You put a complete meal in the "Flavor Zone" oven, set a clock and thermometer, and there's nothing more to do until dinner-time. What's more, you are freed forever from carrying wood, starting fires, scouring the bottoms of pots and pans—all the hard tasks that make cooking a burden in the farm home.

The fuel section of this range burns coal or wood and provides an inexpensive way of heating water or heating the kitchen in winter.

WESTINGHOUSE ELECTRIC & MFG. COMPANY
Offices in all principal cities — Representatives everywhere

Motors for every job on the farm—electric irons—vacuum cleaners—heating appliances—when they carry the Westinghouse trade-mark you know they are good for years and years of hard service.

Westinghouse

Time—Her Most Precious Asset

IT never will be very hard for any woman living on a farm to occupy her time. The duties of home-making are enough to keep any farm mother busy; and to-day, we realize that the back-breaking labor that used to make farmers' wives old before their time never was "woman's work."

No labor-saving device has proved its value on the farm more thoroughly than the electric washing machine. At the touch of a button, little G-E motors on washers, pumps, and other devices will do many tasks while mother does something else. Hours of time—her most precious asset—are saved at the cost of a few cents for electricity.

Ask Your Power Company

If your farm is on or near an electric power line, ask the power company for a copy of the new G-E Farm Book which explains more than 100 uses for electricity on the farm.

GENERAL ELECTRIC

Electricity on the Farm

Vol. 1 JULY 1928 No. 13

Farm Lighting While farmers everywhere have always enjoyed one advantage not granted to many other types of workers—they do the major part of their work outdoors in the best of light—they have had to put up with one of the poorest sources of illumination—the kerosene lantern—for doing the chores.

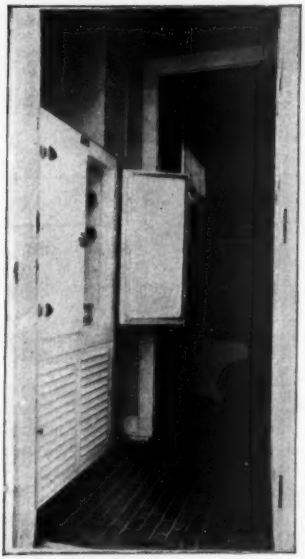
Electric service, however, is placing them on a par with workers in other industries by providing satisfactory illumination for after-dark work as well as inside work during daytime.

But even with electric lights there is still a possibility of improper illumination. Lights may be employed which produce a fatiguing glare on the eyes, may be improperly placed, and the highest efficiency may not be secured from them. Beginning with the next issue of *Electricity on the Farm* a very able series of articles on the subject of farm lighting will be featured. They will be the work of Mr. W. C. Brown and Mr. M. F. Meaker, of the Engineering Department, National Lamp Works, and should prove not only interesting but very helpful to our readers. These articles deserve careful study.

Cooling Milk The impression seems to exist generally that cooling milk by electrical refrigeration is an expensive process, both as regards the initial cost of the apparatus and the cost of operation after apparatus is installed.

Insofar as the first cost is concerned, electrical refrigerating equipment actually represents a smaller investment than that of an ice house and its equipment. As to the cost of operating, this is a variable factor. While some dairymen have found that electrical refrigeration is a little more expensive than home-made ice, there is evidence that in many cases the reverse holds true. In Pennsylvania, for instance, dairy officials active in the rural electrification movement state that the operating expenses of electric refrigeration amount to no more than the expense of cutting ice and filling the ice house each year.

With their economy and convenience established, there is no doubt but what electrical refrigerators for milk cooling will find increasing favor in dairy farms throughout the country.



The refrigerator can even be 'built in' if that is convenient. This one stands in the back hall, just off the kitchen.

Cheating the Cellar

By E. R. MEACHAM

"I've a beautiful hod
Which I fill up with brick,
Swing up on my shoulder
And hold by the stick.
It's as aisy as rhyming.
I've nothing to do
But descending and climbing
The whole day through."

THE housewife who runs up and down the cellar stairs half a dozen times a day balancing a pitcher of milk and a cake of butter in one hand, and holding a covered dish in the other is not so sure that this is "nothing to do."

And throughout the northern sections of our country carrying the milk down cellar becomes a regular part of the household schedule about the beginning of fly time and lasts till the first crisp days of fall.

We read a good deal about adequate dairy refrigeration these days, because the buying public demands milk protected from every possible danger, milk that is clean to begin with and is guarded against the attacks of bacteria by temperatures that discourage their growth.

The United States Department of Agriculture says that any perishable food must be kept at a temperature below 50° to keep bacteria from making it unfit for human use. Our damp, shadowy cellars were comparatively cool, and they did keep the butter firm and the milk sweet a little longer, but it is evident that their summer temperatures are not low enough to furnish real protection.

Saving Food

There has always been a race between us and these microscopic organisms for what we eat. Our forefathers frequently lost in this race, and the food they could not eat within the day, they were forced to throw away. But as we have become more particular,—more insistent on saving food,—we have developed the process of artificial refrigeration. First it was with ice, but now it is a mechanical process that preserves the

taste and appearance while it keeps foods at a safe temperature.

Artificial refrigeration also saves woman power. It is obviously more convenient to store food in a refrigerator than in the cellar, for it cuts off several miles of the housewife's summer journeying in meal preparations. It changes cooling habits, too.

"I no sooner got my refrigerator in than I found I could cook once and eat three times," a friend of mine, Mrs. Clarkson, told me. "I can boil potatoes enough at one time to have them mashed today, creamed tomorrow, and hashed brown on Wednesday.

Two Meals at Once

"I often get most everything ready for dinner and supper in the cool of the morning, too," she went on. "I can put it all into the refrigerator and have it ready to cook or serve hours later. Even cookie dough and pie crust can be kept in the refrigerator for several days and baked fresh as occasion demands."

Another woman in our neighborhood takes a particular pride in the luxuries mechanical refrigeration affords,—things like the ice cubes, and frozen salads and desserts.

Cracked Ice for Drinking Water

"Maybe we don't need cracked ice in our drinking water," she admits. "But I'm telling you its mighty comforting to a hot and tired man. Then the ices and salads I make have revolutionized our summer meals. The men enjoy them so much more than puddings and pies in hot weather."

The electric refrigeration unit is a set of coils which takes the place of a cake of ice, plus a compressor, driven automatically by an electric motor which stands in the bottom of the refrigerator or perhaps in the basement of the house.

The operation of this unit maintains a crisp, dry cold at all times.

Making Frozen Desserts for July Meals

The food chambers are generally kept at a temperature around 45°.

When the housewife looks at a refrigerator, she examines the lining to make sure that it is seamless and therefore easy to clean. She counts the freezing trays, and notes the number of shelves and the space provided for food storage.

But the engineer considers the box from an entirely different angle. A great many engineers have been studying a great many refrigerators installed on farms all over the country, trying to find out, if they can, what factors influence their efficiency and the amount of current they consume.

They have decided that the insulation of the box is the most important single factor. An adequate insulation, they claim, is about 2" thick, non-absorbent and free from odors. Cork board is a very good insulation.

Early Designs

Early boxes were made with several doors on the theory that less heat would enter if less of the box were exposed each time a door was opened. But tests show that single doors are better because of the unavoidable losses through the door frames, and the consequent increase in current consumption to maintain a low temperature.

Apparently the size of the box makes very little difference. Well insulated larger boxes take very little more current than the smaller sizes. Neither is the location of the box near any source of heat of much importance through most of the year. There is very little difference in the average temperature of different locations in the summer time. In the winter a box in your warm kitchen may use more current than it would in a cooler hall or entry way, but it may also be more convenient.

Putting hot foods into the box to cool may be entirely worth while in an emergency, but it is well to recognize that you are asking an extra favor of your refrigerator, and are making it consume extra current in cooling them. The amount of frozen desserts you make also varies the energy the motor demands.

That energy has been accurately determined to the very last kilowatt hour for some forty-seven different boxes on forty-seven different farms. It averages 46 kw. hrs. a month.

Economical Refrigeration

But in South Dakota there is a group of farmers whose average current consumption for their refrigerators was only 33 kilowatt hours a month for the year 1926. The summer peak, extending through July, August and September was 80 kw. hrs. a month.

Cheaper than ice, at that!

And what are the housewife's responsibilities for this new piece of equipment?

They are very simple. She plugs it into any convenience outlet just as she does her electric iron. She starts the motor by a turn of the switch and after that it stops or starts day and night as the temperature within the box demands. She keeps it clean with tepid water, sometimes using a little ammonia or sal soda, but no soap. Every few weeks she adds a little oil to the motor bearings, and occasionally she turns off the motor to allow the frost and ice to melt off from the cooling unit.

"Artificial Refrigeration saves woman-power. It is more convenient to store food in a refrigerator than in a cellar, for it cuts off several miles of the housewife's summer journeying in meal preparations."

Part of the Overhead Irrigation System on the L. W. Purdum Farm

Southern Farmer a Large User of Electric Service

Makes It Do All the Heavy Work Around His Truck Farm

By CHAS. E. SEITZ

MR. L. W. PURDUM, a truck farmer of Danville, Virginia, is demonstrating that in truck farming a large amount of electricity can be used to increase the profits from farming. This farmer uses an average of about 20,000 K. W. H. per year for irrigation, insect pest control, refrigeration and household conveniences.

Mr. Purdum with his five sons operate a farm of 104 acres, 32 acres of which are under irrigation and planted to truck crops. The principle crops in the order in which they mature for market are: Spinach (early) 2 acres, turnip salad (early) 8 acres, lettuce 5 acres, strawberries 2 acres, beets 1 acre, cabbage 1 acre, early tomatoes 3 acres, cantaloupes 4 acres, late tomatoes 3 acres, fall spinach 4 acres, purple turnip 4 acres, turnip salad (fall) 8 acres, celery 4 acres, and peppers 1 acre. Other crops are grown in small amounts but they are not depended upon as revenue producers. Vetch is used as a cover and green manure crop.

Overhead Irrigation

Mr. Purdum senior started his operations on this farm some 35 years ago. He began with general farming and gradually worked into specialized truck farming. After several years trying to raise truck without irrigation, he became convinced that he could never make much of a success depending on the rain alone for watering the truck crops. In 1915 he installed the first unit of an overhead irrigation system and seven years later completed this system

for the 32 acres. The entire installation cost about $9,000.00. After the completion of the irrigation system the 32 acres were tile drained.

Irrigation System Layout

His irrigation system consists of a pumping plant and a pipe line distribution system. The pumping plant is located on the banks of a small stream at the lower edge of the farm. The pumping unit consists of a 3 cylinder, 7" by 8" Goulds pump direct connected to a 20 h.p., 3 phase Wagner motor. The suction lift is 13.5 feet, while the highest point on the farm to which water is pumped, is about 100 feet above the water level in the stream at the pumping plant.

Refrigeration Plant on the Purdum Farm.

The distribution system consists of 1450 feet of 4 inch and 1800 feet of 2 inch pipe mains laid underground, and 18,300 feet ¾ to 1½ inch overhead pipe lines. One inch of water can be sprayed on 8 acres in from 10 to 12 hours. In extreme dry seasons two irrigations per week are made.

Tomatoes have been one of the best revenue producing crops and the Purdums usually top the market with their high quality tomatoes. Before 1922 the tomato worm was responsible for a loss of over 50% of this crop each year. Practically all the recommended control measures were tried with little success. As a last resort Mr. Purdum senior conceived the idea of attempting to trap the tomato worm moth by means of a light trap. He constructed a simple trap consisting of a 40 watt mazda lamp, protected from

Two Modern Dwellings on the Purdum Farm. Refrigerating Plant in Right Foreground.

rain and irrigation water by a metal reflector. A three quart pan containing kerosene was suspended from the reflector about 6 inches below the lamp. When turned on at night the lights attract the tomato moth and some other insects, and when they fly against the light bulb they drop into the pan of kerosene beneath.

The light traps were installed at the rate of about 3 per acre. The total cost for 32 acres being about $1000.00. The lights are used 10 hours a night for an average of about 12 weeks during the spring and summer. The current cost is approximately 4 cents per light per night of operation. The lights are usually started about the 15th of April and run for 6 weeks. They are started again about the 28th of July and run 6 weeks, more or less, depending on the season. Mr. Purdum has found that the practice of using the lights during the early and late season apparently give as good results as continuous use throughout the whole season.

This is evidently due to the tomato fruit worm adult of the species (Heliothes absoleta) making greater flights in the early spring and mid-summer than at any other season. Government entomologists report that

Electric Light Insect Trap as Used on Purdum Farm.

they have had the same experience with this species of fruit worm.

A Cold Storage Plant

The Purdums also operate a large cold storage plant on their farm. This plant has a capacity of from 6 to 8 car loads of "trucks." A 15 H. P. motor operates the refrigerating unit. The plant has an energy consumption of about 1000 K.w. hrs. per month, and cost complete approximately $15,000.00. The refrigeration plant makes it possible when necessary to hold the produce over for more favorable marketing conditions. Strawberries can be held for 2 weeks, cabbage about 6 months and tomatoes almost indefinitely. This plant serves as a buffer for abnormally low prices and it is considered a very essential part of the equipment for the 32 acres in truck.

The Purdums say that the electrical bill is the easiest bill they have to pay, as they realize that it would be impossible to make the success they are making without this source of convenient power.

Wood Sawing and Sow Farrowing

To the Editor:

Herewith are a couple of snapshots showing our electrical saw rig. It is one of the handiest machines we have on the farm. We sawed 100 loads of wood this winter with the same machine. It requires only a 3 H.P. motor and has the power of a 5 H. P. gas engine.

Another experience I have had with electricity on this farm, as suggested in your issue of January,

Gus Loegering's Saw Rig.

Left, the Rig placed ready to Begin Work. Right, the Woodpile after the above Saw Went Through It. Motor on Saw Rig is shown in Center of Picture.

1928, is concerning sow farrowing. When a cold snap comes along, and the sows are just farrowing, I place a bathroom heater in the shed and direct the heat rays on the sow. I find it works wonders in keeping the little pigs warm.—GUS LOEGERING, Long Prairie, Minn.

Yes, It's a Big Help to the Housewife

By A. M. BATSON

THERE are no off-days for the farm housewife.

Rain or snow, hot or cold, in crop season or out, weekdays, Sundays and holidays, the farm housewife must carry on, for the home must function at all times and there are always hungry mouths to be fed, aside from the multitude of other tasks which must be performed in this business of home-making.

In the past the bringing of city conveniences to the farm homes has been a grave problem. Today, through rural service, these advantages become available to agricultural communities. The farm home can be, and often is, as convenient as the city home with its abundance of light, and consequent good cheer, water under pressure, baths, washing machines, electric irons, vacuum cleaners, and the electric range, which is the most satisfactory and highly developed method of home cooking.

Today the electric range is being used successfully and economically not only in the warmer climates and where the wood situation has become acute, but farmers in Northern Minnesota where most farms have generous wood lots, are adopting them and heartily endorsing their dependability, convenience, cleanliness, ease of operation, economy and consequent release of the housewife's time from constant attendance on the preparation of foods. Farmers cannot afford to spend their time in preparation of wood for their own consumption and successfully compete with electricity for cooking at the low energy rates now generally offered.

A Combination Range

The accompanying illustration shows the home of Mr. and Mrs. Swan A. Nelson, located about 4½ miles from the little inland town of Almelund, Minnesota, with the electric range recently installed by them. This type of range seems particularly well adapted for farm use. It is in reality two stoves in one. On the left you will notice a standard wood fire box with a two lid cooking top, and ample capacity for ashes. On the right is a

"Farmers cannot afford to spend their time in preparation of wood for their own use and successfully compete with electricity for cooking at the low energy rates now generally offered."

Mrs. Nelson finds cooking the electrical way produces tastier foods, besides eliminating all guesswork.

complete electric range with three surface cooking units and an oven of ample capacity for farm requirements. The coal or wood fire box provides a convenient means for disposition of trash accumulating around the house and in Spring and Fall a quick means of taking the raw chill out of the house on cool mornings and evenings.

In this particular home there is no furnace to combat the severe wintry weather of that locality, but the Nelsons have found that a wood fire in this range has kept their kitchen comfortable with outside temperatures registering below zero. During this season when it is essential that the kitchen be heated by this method Mrs. Nelson has done a great deal of her surface cooking over the fire, thus utilizing fuel required for heating for two purposes and effecting a corresponding saving in electric current.

All baking is accomplished by the use of electricity as that has been found the most satisfactory cooking fuel, and with the use of the automatic temperature control all guess-work has been eliminated from baking, a thing not possible when using wood or coal. A simple setting of the heat regulator, a snap of the switch, and the housewife may go about her duties in another part of the house or outside with full confidence that her oven will heat to the desired temperature and no further, and furthermore that it will deviate but a few degrees during the entire baking period and that foods in the oven will have the same care as though she remained in constant vigil over them.

Dinner Cooks Itself

With the full automatic range and proper planning the housewife may prepare her meal in the coolness of morning, place the entire dinner in her electric oven, set a couple of dials on her range and leave the house without further thought, knowing that on her return her dinner will be thoroughly cooked on time and ready to serve piping hot, with the same care and economy as though she had been present to personally superintend the operation. This gives the housewife freedom heretofore unknown. Aside from this freedom women declare that foods are better, roasts juicier and more tender since they roast in their own steam and do not require constant basting and further that shrinkage in meats is almost eliminated. Vegetables likewise are tastier and more nutritious as they are cooked with a minimum amount of water and retain the mineral salts usually drained off.

Probably more dirt and dust are brought into the house through the use of the old wood or coal stove than any other device in the farm home. With the installation of an electric range, these two items are reduced to a minimum, for there is no fuel carried through the house, no smoke or soot from the elements and no ash or residue remaining after the electrical energy is consumed. Cooking utensils are free from soot on their bottom surfaces, the curtains and decorations of the kitchen remain clean for a much longer time, while the range itself is as easily cleaned as a porcelain dish.

Gives Comfort in Summer

In the summer time, when most any house is several degrees too hot for comfort it is no longer necessary to introduce additional heat for the modern electric range is so constructed that practically no heat is transmitted to the room to the discomfort of its occupants.

A careful comparison of various cooking devices with results obtained by each, is responsible for the increasing use of the electric range in agricultural communities.

"Foods cooked in an electric range are better, roasts juicier and more tender since they roast in their own steam and do not require constant basting; shrinkage in meats is almost eliminated."

A Water Heater In The Home

By ETHEL MORRISON-MARSDEN

MUCH has been said of the value of an electric water heater in the dairy but little emphasis has been placed upon the possibilities of a water heater in the farmer's home. It is not necessary for me to quote figures and statistics, there are numerous other writers to do that, but I can, as a farmer's wife, tell what a great help, a joy, and a comfort an electric water heater has been to me.

We did not really feel that we needed one, although we knew we would enjoy one, when we purchased ours—but the manufacturer (for 'twas he that sold it) was so much more adept at words than we, that he outtalked us, and much to our own surprise we left his factory with a water heater in the car. My husband installed it himself, for it was a simple matter.

Holds Heat Well

Ours is a large round tank holding ten gallons of water with heating elements surrounding the tank, the whole being heavily insulated. In fact the insulation is so thick that the heater holds the temperature of water to within about ten degrees of the original temperature, through a period of ten or twelve hours after the "juice" is turned off. Our heater is equipped with not only an automatic control but a switch as well and we turn this off at night, thus saving current.

Here's the Ten Gallon Water Heater in the Morrison-Marsden Home.

The automatic control is of great benefit to those having running water, for as hot water is drawn out, fresh cold water flows in, and the water is kept at a very even temperature in this manner, by throwing the current on as soon as the temperature has fallen a few degrees. Some of the new heaters have a clock on them and this can be set to run for any length of time, from one minute to an hour and the current will run for just that time. At the end of the designated period the clock will turn it off. By a careful study of this quite a saving can be made on juice.

I was surprised to find that it actually was cheaper to use this electric heater for heating my water than it was to heat it on my electric range. And it surely works very nicely in conjunction with an electric range—for those persons who do not have coils in a wood stove or furnace certainly feel the need of some system of hot water.

We have ours installed beside our kitchen sink as shown in the accompanying illustration, and even though we do not have running water in our home we find it easy to fill with a large funnel. There is a faucet from the heater into the sink and everyone in the family makes good use of the hot water faucet.

Particularly Useful in Summer

For those people who during the winter months get their hot water supply from coils in furnaces or range, this would be an ideal arrangement for summer months—for it is in summer that we miss it when we have been used to it through the rest of the year. In summer we have guests from the city, guests who are used to all of the accommodations and comforts of city life and who feel greatly the lack of hot water on country visits. In summer months the men too, appreciate the hot water for their daily baths after the hours of sweaty toil in the field. For those homes where there are babies, or where there is illness, certainly there can be no limit to the usefulness of such a heater in either summer or winter.

Serves Well in Winter, Too

For our part, we live in the tobacco growing area and especially in the winter months have the men folk appreciated our heater. In the process of stripping tobacco there is a gummy substance that adhers to the hands and nothing but hot water and soap will touch this. Previously when our men came in at noon and night to wash for meals one burner on my stove always had to be reserved for their hot water—and sometimes this was quite inconvenient in the process of preparing a meal for several men. Occasionally I would forget their water with disastrous results; but since we have had the heater I have no more worry or bother in this direction.

Mighty Handy

It is so handy to draw your dish water off at the sink, to scald your dishes there for draining, to rinse out a few clothes, to use for scrubbing and mopping floors. At house cleaning time its value cannot possibly be estimated. Recently I have found that I can heat enough water in it at one time to do my laundry with. This does away entirely with the need of a laundry stove; it does away with a good share of the mess made in washing in one's kitchen (as I have to) when one can obtain hot water from such a source. Another discovery of ours is that the water drawn from the faucet is just exactly the right temperature for scalding chickens preparatory to removing the feathers. They can be easily and quickly dressed after a bath in this water. When one is dressing any quantity it is of great assistance.

Cleaning Milk Pails

The farmer's wife finds it a great convenience in washing milk pails, milking machinery, separator, and milk cans. I know of one woman who formerly used to heat a boiler of water each day for washing the

(*Continued on page 23*)

"Were we asked to name the electrical service we appreciate most the family's vote would go for the lights, yet the children's mother says, washing machine, and their daddy, the electric dairy equipment sterilizer."

Investments and Profits

By L. N. Irwin, Davis, Calif.

WHEN we first came to live at Inyoloco, the Irwin Place, a forty acre farm four miles west of the University of California Agricultural Farm at Davis, Calif., there was no "juice" available in our section. The farm was planted largely to alfalfa and we soon started in with cows. A gasoline engine was installed to run the pump and separator and later to operate the milking machine.

Wiring When Building

When our house was built in 1915, we had the contractor include in the building specifications plans for complete electrical wiring at an added cost of fifty dollars. This has proved to be a wise investment since the house was so constructed as to make wiring much easier at some later date. Yet it wasn't until 1922 that the power company built a distribution line into our neighborhood. We were not much excited about it at that time as we had not yet enjoyed its many services. To be sure we fancied electric lights would be wonderful. We knew they were cleaner, safer and so much better than just the kerosene lamps and lanterns which we were then using. Of course a motor instead of the old gas engine to run the milking machine and an electric water pressure system to furnish water at all times without fail and without thought were to be desired. So we signed up for these items. Fixtures and wiring for the house at that time cost me $75.00 while wiring for the milk barn and milk house cost $29.00, and a one-horse motor, $85.00. The water pressure system cost $265.00 installed.

Our light bills at that time ran from $1.40 to $2.25 per month and our power bills (we have two meters) $3.65 to $4.50. The electric lights cost more than coal oil lights, to be sure, but they are much more efficient and safe. The power bill at that time was less than the gasoline bill and much more satisfactory.

Saves Cost of Help

But it wasn't until we added other electrical equipment that we truly appreciated the value and service of electricity. In the early days of our farm life here in the west (we are from Il-

(*Continued on page 22*)

Electrical Housekeeping

Summer Salads

I WENT to a luncheon with a group of home economics women the other day. At it our hostess served a very charming salad that evoked a good deal of praise.

Rather small leaves of lettuce curled around a bright red apple. It had been peeled and boiled with a touch of fruit coloring. The stuffing was made of chopped cabbage and celery, and the whole was topped with a stiff yellow mayonnaise sprinkled with salted peanuts.

My neighbor on the left, a stranger to the group, said with a sigh:

"My family doesn't care for salad."

If she had said she did not believe in constitutional government, or confessed she had a lurking idea that the earth is flat, she would not have aroused the table more.

Value of Salads

Those nutrition experts rose as one man and fell upon her tooth and nail, polite as Chesterfield, but simply bursting with information they must get rid of.

Salads from "garden sass," I learned, are just about essential as any well regulated household. First, those dusty vegetables we have been hoeing and weeding since time began contain the necessary mineral salts which help to regulate the work of the body, or to repair bones, teeth and muscles. They are an important source of vitamines and they furnish bulk to the meal.

What is the trick in salads?

They must appeal to the eye as well as the palate. Beauty is largely a matter of color contrasts and harmony. Think what a bondless range we have in our own gardens for salads that catch the eye.

Salads that Grow in Your Garden

Cabbage, celery, green peppers.
Cabbage, pickles beets on lettuce.
Peppers filled with cottage cheese and sliced tomatoes.
Boiled string beans.
Diced carrots and raisins on lettuce.
Radishes, onions, cucumbers on lettuce.

Backgrounds are pretty sure to be green. There are the deep tones of cooked spinach, and the lighter shades of lettuce and cabbage. I have seen a lovely salad served on a large, flat grape vine leaf. Of course, there is a case where no one eats the garnish, but it makes an effective background when lettuce is gone.

The purple of plums, the yellow of carrots, the green of cucumbers, the reds of beets and tomatoes can all be used to make salads of definite and striking colors.

Colors in Salads Are Very Essential

We are all so familiar with the cucumber, tomato and lettuce combination, that we more than half forget that one reason for its popularity may lie in the vivid contrasts in its coloring.

There is just one thing worse

than a colorless drab salad. That is a wilted, droopy one.

All of the green things that go into or under a salad must be perfectly clean, cold, and well drained to be appetizing.

I wash my lettuce and put it in the refrigerator in a little bag made of a piece of a flour sack. Before I had a refrigerator I used to let it stand in cool, fresh water, and then drv it with a towel before I served it.

Now I find that many salads can be put together, piled on their little cups of lettuce leaves and set away in the refrigerator for some time before the meal. They come out crisp and cold enough to put enthusiasm into the most listless dinner.

The Younger Generation of Frying Pans

THE latest generation of frying pans demands an electric cord rather than a cook stove to furnish the heat. I saw the one in the picture at a friend's last summer.

It is a long handled dish that looks at first as though it had three legs. It really hasn't any legs at all, but it sits on a solid wire rack, high enough to keep the heat of the pan from spoiling the finish of a table or threatening a cloth.

The pan is made of two layers of sheet steel with an electrical heating element between them. The heat comes from the current that passes over the wires in the handle.

This New Frying Pan Operates Right on the Breakfast Table.

Excellent for Broiling

It works from any convenience outlet on the lighting circuit. Of course the wiring that is designed for lights does not carry as much current as that which supplies a range or hot plate.

"It just means that I can't build as big a fire under it as I could under the plates of a range that was regularly wired for heat," my friend says. "But I know it will warm up potatoes or vegetables, and fry eggs. It will fry meat, too. And I can use it for excellent broiling if I do not put in too much at a time, nor demand too much speed. I am willing to do quite a lot of planning to avoid heating up the kitchen for every meal during July and August. It all depends upon learning just what it will do and taking advantage of that rather than expecting it to do the impossible."

"How about bacon and eggs for breakfast?" I inquired.

"It will do them beautifully. I like it for omelets and pancakes, too. It is handy because we can use it anywhere we have a convenience outlet. Sometimes we have supper out on the porch, and I plug it in out there. I often make an omelet right at the table and dish it up piping hot."

The pan has to be washed rather carefully because it cannot be dipped in water. But aside from that it requires only the ordinary care given any steel utensil.

Placing Food in the Refrigerator

YOU can't thrust food into your refrigerator helter skelter and get the most out of your refrigeration.

There is a difference of anywhere from 4° to 10° in the temperature of different parts of the box. So the placing of different foods always in the same places is not a mere whim for orderly arrangement. It is an intelligent use of our knowledge of foods and of refrigerators.

The most delicate foods, milk, butter, meat broths, cereals and custards, belong in the coldest spot. That is directly under the cooling unit. The milk and butter absorb ordors more readily than most foods, and so it is doubly necessary to have them here where the air that strikes them is fresh and free from the odors of the rest of the food.

If the cooling unit is at one side of the box, the coldest place is on the bottom directly under it. The next coldest place is on the other side. Here we put the uncooked meats, and on the shelf above, the cooked meats, berries, eggs and vegetables, or fruits that have no decided odors.

But if the cooling tank is across the top, these positions vary. The spot directly beneath it is still the coolest, but it is on the top shelf this time. As the cold air passes over it to the next shelf, and then to the one below that, it keeps taking up a little more heat all of the time. It is the bottom of this box that holds the cooked meat and the eggs and vegetables.

Cooling by Air Circulation

The cooling of the foods in the box depends upon the constant circulation of cold air. It flows down from the cooling unit and back towards it again. Knowing how these air currents move helps you to place your food so that the odors of oranges or cabbage will not taint the milk or butter.

The air passing over the food takes up odors with the moisture and drops both of them on the cold surface of the cooling tank. If you put the foods with strong odors on the top shelf of the box with a cooling tank at the side, the air will pass over them last before it strikes the cooling unit, and they won't hurt anything else in the box.

When the tank is in the top, the warm air is going up both sides, so your strong smelling foods should be placed near the side walls where the air is moving rapidly toward the cooling unit.

Because this constant circulation of cold air cools the food, it is important not to place the dishes so close to each other that they shut off the circulation. If you will have enough space for the air to pass around them freely, you will keep your food cold and fresh.

Investments and Profits

(*Continued from page* 19)

linois) our family was small and Mrs. Irwin managed well enough. Now with eight in the home, and no hired help except our electrical servants, what in the world she would or wouldn't do without her washer, electric iron, Westinghouse sewing machine, electric range, vacuum sweeper, Wesix air and water heaters and last but not least, her dear curling iron, I do not know. Roughly all this equipment, including installation, cost $570.00. In the dairy we installed about two years ago an electric dairy equipment sterilizer which supplemented an old coal oil unit, very much to the comfort and convenience of its owner.

The total costs have naturally increased with the increased use of electricity on our farm. Lights and ironing now average $3.50 a month. The energy cost to operate all the other electrical equipment, which includes range,

water and air heaters, pumps, sterilizer, etc., averages about $20.00 per month. This will probably seem to be a large amount of electricity to those people who are not yet electrified, but with an increased use of electricity other costs have decreased. Electricity is more than paying its way in lowering my production costs and in bringing to us the comforts and conveniences of the city.

With a total cash outlay of $1,125 (the price of a moderately priced automobile) for all my equipment there has been very little expense for general upkeep, perhaps $25 would cover this item over a period of six years.

I am now building a new milking barn and milk house which will accommodate twelve cows and which will be modern in every detail. It will be completely electrified. In addition to the usual barn lights, milking machine, electric sterilizer and pumps we will install a dairy refrigerating machine. By enabling us to sell a better grade of milk it should prove to be a very wise investment.

Were we asked to name the electrical service we appreciate most the family's vote would go for lights, yet the children's mother says, washing machine, and their daddy, the electric dairy equipment sterilizer.

With electricity in general use on the farm there is good reason for the average family to be happy and contented.

Home Water Heater

(*Continued from page* 18)

milking equipment. Recently they installed an electric water heater and she tells me that her work is cut almost in half. The farmer's wife has always enough work waiting to be done that she welcomes any saving of minutes or strength and she, with her multitude of duties, is entitled to all the labor saving devices that can be purchased for her.

Truly the joys of an electric water heater are a thousand and one. Everyone with electricity should be enjoying them.

Here's What Every Farm Boy Likes

The well equipped farm work shop is the busiest place around the electrified farm. Electric lights make night work convenient and attractive. A forge with motor driven blower, an anvil, a motor drill press and a complete assortment of tools gives the modern

A Corner in a Modern Electrified Work Shop.

farmer about all the equipment he needs to make emergency repairs. And in the picture herewith you see one of the newer appliances in use—the electric soldering iron. It comes in mighty handy for repairing such equipment as spray apparatus, tanks, metal bins and household utensils. Farm boys like the electrified work shop, and how could it be otherwise when the place is made so attractive with brilliant lights, power operated appliances, and about everything inventive boys could wish for.

Electric Cold Storage A Success on New York Farm

AFTER four years of operation the electric equipment of the Prospect Hill Farms at Milton, Ulster County, has been voted a great success. Prospect Hill, the property of J. R. Clark & Son, is a 100 acre fruit farm that has been owned and operated by the Clark family for 110 years. One-half mile of power lines on this farm supply electricity to storage plant, residence and tenant houses.

Since 1923 a 3500 barrel cold storage plant entirely equipped with electricity has been the feature of this fruit farm. For a six months storage period the cost per barrel amounts to but ten cents. A 10 hp. motor with automatic control is used for the compressor.

Apples, pears and cherries are kept in the storage house. For the past thirty years fancy fruit has been exported to one firm in Scotland. The produce is packed in barrels and bushel baskets and the extra fancy stock in attractive paper cartons. Fancy McIntosh apples are Prospect Hill Farm's specialty and have gained a wide reputation in fruit circles. The New York supply is shipped directly to the city by motor trucks.

Besides this cold storage plant much other farm work is electrically accomplished with an estimated saving of 50% in labor. Illumination, a fruit grader, ½ hp. motor, an emery wheel, tool worker, water system, washer, vacuum cleaner, charger for auto and radio batteries, and numerous small appliances in the home are all electrical.

Little Motor Does Its Work

Quite a tiny motor for the size of the machine it is operating, you might say. But the fanning mill does not require as great an amount of power as one might think it does especially after operating it for several hours straight.

The fanning mill, which this little motor is driving, is used for cleaning barley which you see on the floor in the foreground. But when the fanning is done, the motor does not rest for it is then moved to other tasks. It runs the washing machine, and other household and farm appliances, proving itself an uncomplaining and worthy little workman. This picture was taken on the Decator Gellke farm near Palmyra, N. Y. The motor is a ¼ h.p. machine.

One-quarter h.p. Motor Driving Fanning Mill on Gellke Farm

Laundry Irons for Farms

By FRANK J. ZINK
Field Engineer, Iowa
State College

The electric iron is one of the most appreciated and enjoyed of the electric appliances, ranking second only in the preference of the farm family to lighting of homes and buildings. It is economical in operation, using only from 3 to 6 kilowatt hours per month per average family and average size of ironings, according to the records obtained by the Iowa Project on Rural Electrification under the direction of the Iowa State College. In addition a reliable iron will last many years.

However, as evidenced recently by a question in the "Questions and Answers," column of this magazine, there are some people who hesitate to buy an electric iron because of the fire hazard. The cause of fire from an ordinary iron was ably discussed but no mention was made of prevention of the possibility of fire by the use of an automatic iron.

Every prospective buyer of an iron should, before buying, first look over the Automatics and purchase this type if possible. This type of iron is very good insurance against a possible fire as it automatically disconnects the supply of current when it becomes hot. The automatic device is reliable and turns off the current before there is any danger of fire.

The automatic is similar in design to any non-automatic iron on the market. The cost is only a little more than that of a reliable non-automatic iron of good quality.

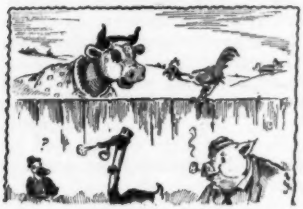
Besides the automatic protection from fire if the iron is allowed to stand with the current on, the automatic control facilitates the work of the operator. The temperature of the iron regulates itself, never becoming too hot or too cold for efficient work. With the ordinary iron the operator has continually to connect and disconnect the attachment plug and cord for controlling the heat. This causes strain on the ironing cord due to pulling out the attachment plugs. There is also much destruction of the contact points by breaking the current supply at the plugs. The contact points of the automatic device are built to withstand this action and will last much longer, and with the automatic control the wear on the cord by frequently detaching the plugs is eliminated.

Not a Big Task, But Who Likes It?

Turning the ice cream freezer by hand is usually not more than a twenty-minute job, but if you like ice cream often it is entirely too long. But if you have electricity available the task almost vanishes. Here you see a small motor operating an ice cream freezer, doing the job better than can be done by hand and requiring only a casual supervision rather than elbow grease. And best of all this little motor can be moved from job to job, to pump water, operate washing machine, operate fanning mill, and other none-too-much enjoyed jobs.

Quarter h.p. Motor Driving Ice Cream Freezer

Husks and Chaff



Mr. Rooster to Mrs. Cow: That smart aleck Drake doesn't need to "high-hat" us. I've heard that the circumstances of his early life were really "shocking." They tell me his mother was one of those electric incubators and had to be "switched" before she'd pay any attention to him!

The Difference

Judge Charles Robert, of an Illinois township, was likewise cashier of his home bank. A farmer presented a check one day for payment. He was a stranger to the judge. His evidence of identification was not sufficient to the cashier.

"Why, judge," said the farmer, "I've known you to sentence men to be hanged on no better evidence than this!"

"Very likely," replied the judge. "But when it comes to letting go of cold cash we have to be mighty careful."

Encouraging

Charles Lindsey, a pioneer farmer in the west, died recently. His widow, advanced in age, and in a declining state of health went, by advice of the family physician, to take lodgings in town. She agreed for a suite of rooms, and coming down stairs observed that the balustrades were much out of repair.

"These," said the lady, "must be mended, before I can think of coming to live here."

"Oh, no, madam," replied the landlady, "that would answer no purpose, as the undertaker's men in bringing down the coffins would break them again immediately."

Appropriately Named

A midwest farming community had purchased a new fire engine which was to be placed in the station of a nearby town. The chief of the fire department, after gathering the committee and the members of the department together, suggested that an appropriate motto be placed over the doorway of the section of station housing the new machine. The thing was debated at some length and several suggestions were made. Finally one man rose up and said:

"I move the following motto": "May this fire engine be like all the old maids in our village—always ready, but never called for."

Worth It

Two women sat one day talking at a community meeting. The first woman had three beautiful children, the other was childless. The childless woman, gazing wistfully out over the fields, said:

"I'd give ten years of my life to have three such children as yours."

"Well, three children cost about that, the other woman answered gravely."

Hiram: Well, Mirandy, while you're percolatin' the java, guess I'll run down an' have that battery charged.

Mirandy: Land sakes, Hiram! Don't go puttin' any more on our bill down at the garage! I always told you it's better to pay cash for everything.

Separating and Churning No Bother to Him

James Knickerbocker is a prosperous farmer operating a well managed farm near Phelps, N. Y. He believes in saving money on labor, and electricity lightens the tasks of separating and churning. He uses the McCormick-Deering separator and a barrel type churn. He says his new separator skims

cleaner. Butter making, too, shows better results with the motor operated churn for churning can be done at the most desirable time and without taking a man from other useful employment.

A Home Made Churn

"I don't like to have my wife bother to sit down and shake hands with the churn for half an hour or more every few days!" exclaimed Mr. Floyd Little of Varna, New York, so he proceeded to build the rig shown in the picture.

A one-eighth horse power motor was used to drive an old emery wheel gearset, and it in turn was connected to the churn shaft with a short piece of belting. By this means, sufficient speed reduction was secured to give the churn a speed of about eighty revolutions per minute. The barrel has a capacity of about two gallons when filled for churning.

"It works fine!" declares Mrs. Little. "Now I can be doing something else while it is running. Of course, I must stop it two or three times to let the gases escape. Now I can make several pounds of butter with very little exertion

on my part. I believe in letting electricity do the work."

His Alarm Worked

Hugh Brueker, a Tuscola county farmer, believes a burglar alarm connected to the chicken coop is a profitable investment.

On the night of January first he was awakened by the alarm bell ringing in his bedroom. As it was connected with the door and windows of his chicken coop he knew someone was trying to gain entrance so he quietly arose and reached for his loaded shot gun which he kept nearby. Then he turned on the lights in the coop, which were connected with his house lighting system. As the light flooded the coop two startled thieves ran out and headed for a truck parked a short distance away. In order to increases their speed, if such a thing was possible, Mr. Brueker fired a shot into the air. The shot accomplished its purpose and the thieves tumbled into their truck which they got in motion and headed away from there in record time.

As Mr. Brueker keeps more than 150 chickens he probably would have lost over a hundred dollars that night if it had not been for his burglar alarm. And the alarm cost him only a few dollars, plus the time it took him to install it.—*The Michigan Business Farmer.*

What Title for the Cover?

ELECTRICITY ON THE FARM offers a $25.00 cash prize for the best title for the picture shown on the cover of this issue (July).

RULES OF CONTEST

1. Contest closes August 5.
2. Contestant must be a farmer or a member of his family *living on the farm.*
3. More than one title may be submitted.
4. In case of a tie, each winning contestant will receive $25.00.
5. Print plainly your name and address, and send your suggestion to Title Editor, ELECTRICITY ON THE FARM, 225 West 34th Street, New York, N. Y.
6. The winner for July will be announced in ELECTRICITY ON THE FARM for September.

The Editor will be pleased to receive from any readers submitting titles a brief outline of the use made of electric current on their farms. This is not a requisite part of the contest, and the titles may be sent in without data on farm uses of electric current if desired.

Here's the Winning Title for May

Just a Washin' and a Wishin'
Submitted by A. F. Gould, Springfield Dairy, P. O. Plainfield, N. J.

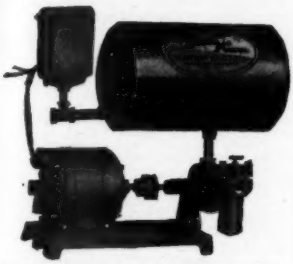
NOT only was the number of titles submitted for the cover of our May issue much greater than that for any preceding cover, but so many very excellent titles were sent in by readers that it was a particularly hard task to make a just selection.

For example, note the following which were among those deserving special commendation:

"Kilowatt Instead of Kill a Woman," sent in by W. Warden of Rushton, Mich.; "Why Girls Leave Home," sent in by several of our readers; "The Last Time Over-board," A. C. Fletcher of R. R. 6, Appleton, Wis.; "The Electric Washer Changes Wash-day into Washhour," Miss F. L. Brown, R. D. 1, Walden, N. Y.; "Is Monday Blue? It's Up to You," Mrs. J. M. Churchill, R. R. 1, Canastota, N. Y.; "A Little Spark a Little Plug, Will Place Her at the Other Tub," Mrs. E. Monroe, R. R. 1, Peoria, Ill.; "The Slave Electricity Alone Can Free," by Mildred McLeod, R. R. 2, Beaverton, Ore.; "Electric Washer Turns Frowns Into Smiles," Mrs. C. Koehler, R. R. 1, W. Bloomfield, Wis.; "Wash Day Ease vs. Elbow Grease," Mrs. E. Scherer, R. R. 4, Watertown, Wis.; "What's the Use of Frowning When You Could Just as Easy Smile?" Mrs. S. E. Hostetter, Denbigh, Va.; "Faces Lifted by Electric Washers," Mrs. E. J. Henderson, Austinburg, Ohio; "A(r)rest Work with an Electric Washer," Mrs. Menzo Lloyd, Weston, Pa.; "It Works! Why You?" Mrs. F. W. Willis, R. D. 2, Paris, Ky.; "Electricity Takes 'You' Out of Tub," Miss E. H. Fish, Manchester, N. Y.; "Killing Herself for Three Cents an Hour," Arthur Lamens, Appleton, Wis.; "Electricity Takes the Rub out of Scrub," Mrs. R. W. Jennings, De Soto, Iowa.

Just a Washin' and a Wishin'

Pump Your Water by Electricity



Here is the little direct connected gear driven suction plant which has been brought out to meet the demands for a low priced, high class water system. There is no belt to slip and thus lower the efficiency of the system. It is a neat, compact little unit; has a delivering capacity of about 300 gallons per hour and only costs $58.00. In producing a system at this low price we have not sacrificed quality for cheapness.

We manufacture other sizes and styles of suction plants, deep well working heads, water softeners, septic tanks, drinking cups for stock, etc. Prices on water equipment, $58.00 and up. Write us about your requirements and for literature, without obligation.

MILWAUKEE AIR POWER PUMP CO.
6 Keefe Ave., Milwaukee, Wis.

Papec Fills 40 Foot Silo with 5 h. p. Motor

Many users have taken the high cost out of silo filling by connecting electric power with the smooth-running non-clog PAPEC. Send for bulletin "Ensilage Cutters and Single-Phase Motors," also new 3-color PAPEC catalog. Read how Mr. Schwinghamer filled 40′ silo with 5 h.p. motor. "Silo filling was a joy this year," he says. Send for Catalog and Bulletin Today.

Ask also for literature on Papec Hay Chopping machines or Papec Hammer Type Feed Grinders.

PAPEC MACHINE CO. Dept. E
Shortsville, N.Y.

"City Water" . . . . no matter where you live

$69.50 F.O.B. DAYTON

RUNNING water under pressure makes the home more comfortable and the farm more productive. These advantages alone fully justify farm electrification. A DAYTON Water System will provide abundant *fresh* running water in kitchen, laundry and bath—water for stock, for sprinkling lawn and garden, and for fire protection. The system is automatic and operates at slight cost on current drawn from your rural power line.

Whatever the source of your water supply and however great or small your requirements are, there is a DAYTON System that will give you economical, trouble-free service. Write today for descriptive literature and complete information.

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Dayton WATER Systems

The following deserve Honorable Mention for titles submitted:

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CALIF.: Mrs. M. Lowe, Standish.

COLO.: Miss D. Wieke, Hotchkiss; Mr. M. Parrish, Montrose; Mr. E. Schuyler, Montrose; Mrs. L. Bailey, Olathe.

CONN.: Mrs. W. Daniels, Niantic; Mr. H. Gorton, Waterford; Mrs. L. Gorton, Waterford.

FLA.: Miss W. Dean, Brooksville; Miss M. Baker, Clearwater; Mrs. W. Stokes, Coleman; Mr. L. Brown, McIntoch; Mrs. C. Teston, Oklawaha; Mrs. J. Gates, Pensacola; Mr. M. Anthony, Reddick.

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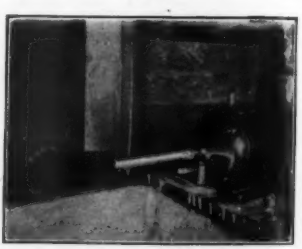
A Home Made Bottle Washer

The illustration herewith shows a home made bottle washer which is certainly a big improvement over the old hand method. A one-sixth h.p. motor is mounted alongside the tank in which the bottles are rinsed. The shaft of the motor is threaded to take a 5/8-in. nut. To the bottle washing brush is attached a shank also threaded to take the



same size nut. The nut is screwed on to the shank of the brush until it is flush with the end. The nut is then backed halfway off the brush shank and onto the motor shaft. The brush shank is finally given a twist to tighten up the joint and the machine is ready to operate. It is necessary, however, to have the thread so cut that the normal direction of rotation of the motor would tend to tighten it up rather than unscrew it.

New York Farmers Tell How They Use Electricity

A questionnaire to New York state farmers was sent out by the State Agricultural College at Ithaca. The questions concerned the use to which electricity was being put on the farm and the equipment in which farmers were most interested. 1,600 answers were received and in general they indicated that all the advantages of electricity on the farm were not entirely understood.

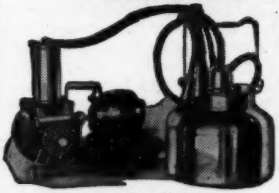
The general uses are lighting, pumping water, washing, ironing, milking, and operating small household appliances. To be sure, there are other uses reported depending on the type of farm but these are not common. Among them are feed grinding, grain cleaning, corn shelling, hay baling, silo filling, wood sawing and animal clipping.

In answer to the questionnaire as to the equipment in which the farmer is interested the following was obtained: Poultrymen are interested in lighting the hen houses to increase egg production in the fall and winter months, incubators, brooders and egg candling.

Dairymen are interested in milk cooling and those that bottle their milk are interested in capping and filling machines. Bottle washers were also inquired about and butter churns for the private stock or for a small retail trade.

Interest is indicated in tool grinders and battery chargers. There appears from the results of the questionnaires that there are a great many farmers who are not familiar with many of the uses to which electricity can be put. The full advantage of the service, both to the farmer in the saving of time and money, and to the electric company in a greater use of their facilities is not fully realized. The maximum economic use of current should be the aim of every farmer to the end that service may be rendered by the power company at the least possible cost and that the maximum benefits from electricity may be obtained by the farmer.

Fords $100 Single Unit Complete **Milker**



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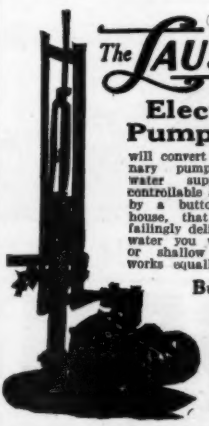

will convert your ordinary pump into a water supply unit, controllable all weather by a button in the house, that will unfailingly deliver all the water you want—deep or shallow well, it works equally well.

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Bees Work Overtime

A very interesting and somewhat amusing experience was enjoyed last spring by Mr. Borlase Matthews, a prominent Electrical Engineer in England.

While sufficient data is not on hand to draw any conclusions, Mr. Matthews' experiment may prove of interest to the readers of this magazine. Here is the Associated Press story:

The experiment was tried early in the spring. A beam of light, he said, was thrown on the entrance of the hives from electric lamps. This had the same effect as a dinner gong in a boarding house and stirred the bees to action.

The sleepy bees rubbed their eyes in anticipation and hurried out into the open to greet what they thought was the first real sunny day of spring. Stimulated by the electric rays which the bees thought came from Old Sol himself, the early bees scampered back into the hive to tell the queen bee and all the fellow bees that spring had come.

Gave Them Feast.

Matthews said his artificial sun caused such a commotion that he could not bear the thought of deceiving the bees further, so he prepared a feast for them. Directly in front of the bees' home a table was set and the lights kept burning. There were plates of nice golden syrup seasoned with salt and vinegar, plates of artificial pollen and other dishes with plenty of nice pure water. Bees are always very thirsty early in the spring. On the table also was a great vase of flowers, to provide the bees with an admixture of real pollen and to complete the illusion.

In the end it was ascertained that the bees got out weeks earlier than they would have if they had waited for nature.

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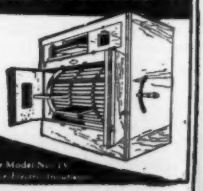

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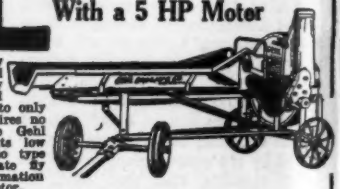

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